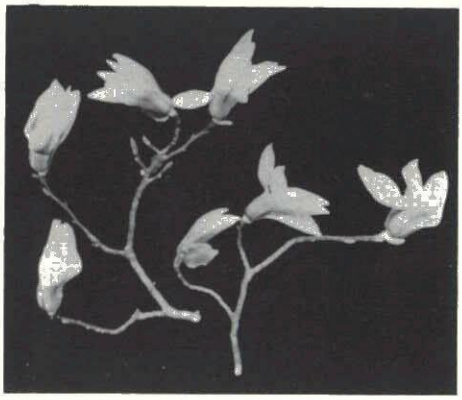
Magnolia Zenii: A Rare Magnolia Recently Introduced Into Cultivation

by T. R. Dudley

Original publication: W.C. Cheng in C. P'ei Vascular Plants of Nanjing, II. Contributions Biological Laboratory, Scientific Society China, Botany Series 8: *291-293. 1933.*

Description (Translated from the Latin):

Small tree 5-7 meters tall; *bark* of trunk ashy or pale ashy in colour and smooth; *branches* spreading; *branchlets* slender, current year's glabrous, whitish-yellowish and sparsely lenticellate; previous year's branchlets purplish and sparsely lenticellate, and smooth. *Buds* elongate and adpressed silky-pilose. *Leaves* deciduous, membraneous, oblong-obovate or oblong, apically abruptly acuminate; bases wide cuneate or rotundate, 7-16 cm. long and 3-7 cm. wide; upper surfaces glabrous and light green; lower surfaces paler; midveins and lateral veins villose and in dried condition appearing reticulate, 10-12 lateral veins on both sides of the midveins elevated on lower surfaces; petioles pilose or glabrous, sulcate on upper surfaces and 6-15 mm. long. *Flowers* precocious, fragrant, cupuliform and approximately 12 cm. in diameter; pedicels 2-3 mm. long and densely pilose; petals and sepals (tepals) 9 in number, all spreading in the same manner and subspathulate; apices rotundate or subacute, 6.8-7.8 cm. long and 2.7-3.8 cm. wide, tepals white, except purple on outer surfaces on lower one-half and purplish lines occurring along the central portions; stamens numerous, approximately 60 in number, 11 mm. long and erect-spreading; filaments 4 mm. long and red, connectives occasionally acute, or rarely subobtuse at apices; gynaecium, with stameniferous part, approximately 22 mm. long; carpels numerous, and erect-spreading stigmas are 1 mm. long. *Fruits* cylindrical, 5-7 cm. long and 1-2.5 cm. in diameter; carpels woody, smooth or slightly verruculose, apices obtuse or rotundate. *Seeds* 1-2, irregularly and very widely obovoid, slightly compressed, 10 mm. wide and long, scarlet; outer seed coats blackish, apices rotundate, bases obtuse or rotundate; ventral surfaces very smooth and sulcate, dorsal surfaces flat and smooth or very smoothly convex.



Flowering branchlet of Magnolia zenii. *This photograph and those on page 21 were supplied to the author by The Tree Group of the Jiangsu Institute of Botany, Nanjing, People's Republic of China, and Professor He Shan-an, deputy director of the Jiangsu Institute of Botany.*

T.R. Dudley is Research Botanist, U.S. National Arboretum, Agricultural Research Service, Northeastern Region, U.S. Department of Agriculture, Washington, D.C. 20002.

Fruiting branchlet of Magnolia zenii.

Lectotype:

People's Republic of China, Jiangsu Province, Paohua-shan, 250-300 meters elevation, 31 March 1933, *W.C. Cheng 4233* (NAS).

The original publication cites three syntype herbarium specimens, two flowering and one fruiting. It is essential that a lectotype be chosen, and I have selected one of the flowering specimens to be the lectotype, *W.C. Cheng 4233.*

Paratypes:

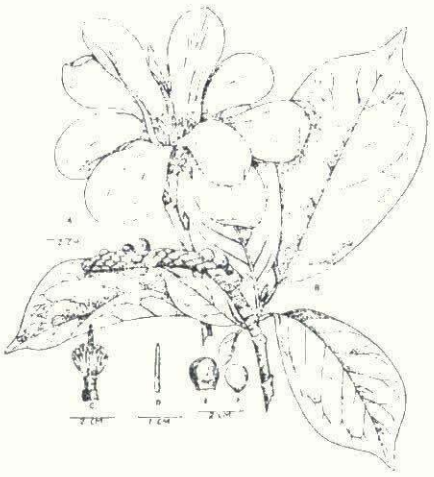
People's Republic of China, Jiangsu Province, Paohua-shan, 9 June 1932, *C. P'ei 3123* - fruiting (NAS); *ibid.*, 23 March 1931, *C. P'ei 2417* - flowering (NAS).

Professor He Shan-An, Director of the Jiangsu Institute of Botany and Botanical Garden Memorial Sun Yat-Sen in Nanjing, reports that there are at present several dozen plants of this very restricted endemic *Magnolia* at the type locality.

This very well marked and distinguishable species was assigned by Cheng in the original publication to Section Gwillimia De Candolle (1817). However, Johnstone (1955) and Treseder (1978) refer it to Section Yulania (Spach) Dandy (1950).

Cheng also indicates that *M. zenii* is apparently closely related to *M. denudata* Desrouseaux (1791) = *M. heptapeta* (Buc-Hoz) Dandy (1934), from which it differs primarily by having oblong-obovate or merely oblong leaves that are glabrous on the upper surfaces, and villous along midribs and lateral veins on the lower surfaces. The leaf apices of *M. zenii* are longer and abruptly acuminate, and its smaller flowers have subspathulate sepals and petals (tepals) that are purple on the lower one-half of the outer surfaces and along the middles. *Magnolia zenii* also appears to be allied to *M. cylindrica* Rehder & Wilson (1927) belonging to Section Buergeria (Siebold & Zuccarini) Dandy (1950). The leaves of *M. cylindrica*, however, are oblanceolate-oblong or oblong-lanceolate, rarely oblong-obovate, and their apices are obtuse or acute. The entire lower surfaces of the leaves of *M. cylindrica* are covered with short and straight hairs. The cylindrical fruits of *M. cylindrica*, borne on longer, 5-10 mm. pedicels, have elliptic carpels. The shape of the leaves of *M. zenii* demonstrates some resemblance to *M. kobus* De Candolle (1817), also of Section Buergeria, but differs by the similar shape and

Tree of Magnolia zenii *at the type locality, Pachua-shan, Jiangsu Province, where Professor He Shan-an reports that "several dozen plants occur."*



Drawing of Magnolia zenii *branchlet appeared in the original publication of this new species.*

dimensions of all of the floral tepals.

Magnolia zenii was not previously introduced into cultivation in the United States or in Western Europe until 1980. It was observed under cultivation in October of 1980 in the Botanical Garden Memorial Sun Yat-Sen in Nanjing, Jiangsu Province, People's Republic of China. Professor He Shan-An, at that time Deputy Director of the Botanical Garden and of the Jiangsu Institute of Botany, presented T.R. Dudley and S.A. Spongberg (Arnold Arboretum, Harvard University) with some fresh seeds collected from trees at the type locality. These seeds were brought to the United States, germinated, and young plants are now extant in the germplasm research collections of the U.S. National Arboretum, Washington, D.C. and the Arnold Arboretun, Jamaica Plain, Massachusetts.

The photographs of this rare species in its restricted wild type locality are graciously provided by the staff of the Tree Research Group of the Jiangsu Institute of Botany. Great appreciation is expressed to Professor He Shan-An, a Comrade in Science and Director of the Jiangsu Institute of Botany and Botanical Garden Memorial Sun Yat-Sen, for loaning original herbarium specimens from the herbarium of the Jiangsu Institute of Botany, for providing a copy of the original publication, and for his continuing and untiring cooperation and friendship.

The line drawing of *M. zenii* was provided in the original publication of this new species.

References

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